

Plans for a STRV-2 to AMOS High Data Rate Bi-directional Optical Communications Link

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The Ballistic Missile Defense Organization has developed a high-data rate (155 Mbps – 1 Gbps) optical communications terminal that will be flown on the STRV-2 satellite. The satellite is scheduled for launch in November 1999, and NASA/JPL has been asked to investigate the use of the AMOS facility as a backup ground terminal to a small transportable terminal constructed by Astroterra Corporation of San Diego. The ground terminal built by Astroterra is designed to support a links out to 2000 km, and will be located at the Table Mountain Facility in Wrightwood, California. Subject to BMDO approval, the demonstration from AMOS will begin in early 2000. For the demonstration, the beam-director tracker will serve as the uplink transmitter, and the 1.6-m telescope as the downlink receiver. It will support bi-directional links out to the 3500-km maximum slant range of the satellite's pass.